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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/350,713	07/09/1999	JOSEPH B. KEJHA	JBK-7	8585

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EXAMINER

VANAMAN, FRANK BENNETT

ART UNIT	PAPER NUMBER
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3618

DATE MAILED: 04/20/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/350,713	Applicant(s) KEJHA, JOSEPH B.	
	Examiner Frank Vanaman	Art Unit 3618	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 January 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 and 9-30 is/are pending in the application.
- 4a) Of the above claim(s) 11-25 and 28 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 9, 10, 27/9 and 27/10 is/are allowed.
- 6) ☒ Claim(s) 1-6, 26, 27/1, 27/3, 29 and 30 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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Status of Application

1. Applicant's amendment, filed Jan 27, 2004, has been entered in the application. Claims 1-6 and 9-30 are pending, claims 12-25 are withdrawn as being directed to a non-elected invention, claims 11 and 28 are being withdrawn as improper multiple dependent claims (see below).

Claim Objections

2. Claims 11 and 28 are objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claim cannot depend from another multiple dependent claim. See MPEP § 608.01(n). Accordingly, the claims have not been further treated on the merits.

Claim Rejections - 35 USC § 112

3. Claims 1-6, 26 and 27 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In claim 1, lines 10-11, claim 2, lines 12-13, and claim 3, lines 13-14, it is not clear whether or not the limitations associated with a hydrogen-only powered vehicle lacking an electric propulsion system are required for the definition of applicant's invention.

Claim Rejections - 35 USC § 103

4. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

5. Claims 1-3 are rejected under 35 U.S.C. 103(a) as being unpatentable, as best understood, over West (US 3,517,766) in view of Munday (US 5,143,025). West teaches a vehicle riding on 1-4 wheels, having a body, an internal combustion engine which is not sealed from the atmosphere, a pair of generators driven by the engine, a battery connected to the generators and motor, the electric motor connected to both the battery and generators, the motor for driving the vehicle, wherein the vehicle is further provided with a steering system. The reference of West fails to teach the engine as being powered by hydrogen, the hydrogen being obtained through the electrolysis of water from a generating cell, and not stored under pressure, the cell electrically connected to the generators and battery.

Munday teaches a very low emission (col. 1, lines 1-31) vehicle engine (10) operated on a hydrogen fuel from hydrogen obtained from a hydrogen storage element (16) which directly feeds hydrogen generated by electrolysis of water in a cell (36, 40, note col. 3, lines 5-20), to the engine and does not store the hydrogen under pressure, the cell being electrically connected (58, 64) to a source of electricity. It would have been obvious to one of ordinary skill in the art at the time of the invention to replace the engine and fuel source of the vehicle of West with a hydrogen engine and fuel supply as taught by Munday for the purpose of greatly reducing vehicle emissions, as specifically taught by Munday, resulting in a vehicle having a longer range, as best understood, than a vehicle lacking the electric drive train and thus lacking a means of regeneration.

The reference of Munday fails to specifically teach that the electric supply be from both a generator and a battery, however, in view of the vehicle of West featuring both a battery and a pair of generators, it would have been obvious to one of ordinary skill in the art at the time of the invention to allow selective connection of the generating cell of Munday to either electricity source (i.e., the battery and/or generators), for the purpose of allowing the cell to be operative under circumstances wherein one or the other of the sources is not in operation.

6. Claims 4/1 and 4/3 are rejected under 35 U.S.C. 103(a) as being unpatentable over West in view of Munday and Hart (US 4,124,741). The references of West and Munday are discussed above and fail to teach a hydrogen storage portion which contains carbon graphite. Hart teaches that it is well known to use carbon graphite to store hydrogen (e.g., abstract, and col.3, lines 27-34) due to its advantageous properties, as discussed by Hart. It would have been obvious to one of ordinary skill in the art at the time of the invention to provide the storage element of the vehicle of West as modified by Munday with a carbon graphite material for the purposes of enhancing the storage of Hydrogen and improving the operation of the vehicle.

7. Claims 5/1 and 5/3 are rejected under 35 U.S.C. 103(a) as being unpatentable over West in view of Munday and Meinzer (US 5,360,461). The references of West and

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Munday are discussed above and fail to teach a hydrogen storage portion which contains a metal hydride. Meinzer teaches that it is well known to use a metal hydride (8) to store hydrogen (col. 4, lines 37-38) as such a material allows high density storage. It would have been obvious to one of ordinary skill in the art at the time of the invention to provide the storage element of the vehicle of West as modified by Munday with a metal hydride material as taught by Meinzer for the purposes of increasing the amount of hydrogen which may be stored, improving the operation of the vehicle.

8. Claims 27/1 and 27/3 are rejected under 35 U.S.C. 103(a) as being unpatentable over West in view of Munday, Kerrebrock et al. (US 5,372,617) and Gallagher (US 3,895,102). The references of West and Munday are discussed above and fail to teach the hydrogen as being generated by a hydrogen generating reactor which produces hydrogen in a reaction with sodium borohydride and water. Kerrebrock et al. teaches that the use of sodium borohydride and water is old and well known for generating hydrogen (see table 1, col. 2), and as such, it would have been obvious to one of ordinary skill in the art at the time of the invention to provide a reactor which generates hydrogen using sodium borohydride and water, as taught by Kerrebrock et al., for the purpose of easily generating hydrogen without using excessive electric power. The modifying reference to Kerrebrock et al. fails to teach the presence of a metal catalyst. Gallagher teaches that it is well known to use metals as catalysts and in addition to control a particular rate of generation of hydrogen in hydrogen generators. See col. 1, lines 8-27, col. 2, lines 26-42, col. 3, lines 57-62; col. 4, line 62 through col. 5 line 12; col. 5, line 46 through col. 6, line 5, etc. It would have been obvious to one of ordinary skill in the art at the time of the invention to provide the reactor taught by Kerrebrock et al. as used to modify the reference of West as modified by Munday with a metal catalyst as suggested by Gallagher for the purpose of controlling a reaction rate.

9. Claims 29 and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Werth in view of Kerrebrock et al. and Gallagher. Werth teaches an electric vehicle construction including an electric motor (11), battery (24), electricity generating fuel cell

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(12), which both powers the motor and charges the battery. The reference of Werth fails to teach the hydrogen as being generated by a hydrogen generating reactor which produces hydrogen in a reaction with sodium borohydride and water. Kerrebrock et al. teaches that the use of sodium borohydride and water is old and well known for generating hydrogen (see table 1, col. 2), and as such, it would have been obvious to one of ordinary skill in the art at the time of the invention to provide a reactor which generates hydrogen using sodium borohydride and water, as taught by Kerrebrock et al., for the purpose of easily generating hydrogen without using excessive electric power. The modifying reference to Kerrebrock et al. fails to teach the presence of a metal catalyst. Gallagher teaches that it is well known to use metals as catalysts and in addition to control a particular rate of generation of hydrogen in hydrogen generators. It would have been obvious to one of ordinary skill in the art at the time of the invention to provide the reactor taught by Kerrebrock et al. as used to modify the reference of Werth with a metal catalyst as suggested by Gallagher for the purpose of controlling a reaction rate. As regards the provision of a body which carries a passenger, at least two running wheels and a steering system, the examiner hereby takes Official Notice that these three features are very old and well known in the art of vehicle manufacture, and it is not deemed beyond the skill of the average practitioner in the art to provide a body which accommodates at least one passenger, at least two running wheels and a steering system for the purpose of providing a vehicle which will safely convey passengers from one destination to another.

Double Patenting

10. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b). Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Applicant's co-pending application 08/950,445 remains unavailable to the examiner, however Double Patenting issues may exist between the claims of the instant application and those of the co-pending application. As the claims of the co-pending application are not patented at this time, any such rejections would be provisional. As the co-pending application becomes available to the examiner, provisional Double Patenting rejections may be applied against the claims of the instant application.

Allowable Subject Matter

11. Claims 9, 10, 27/9 and 27/10 are allowed.
12. Claims 6 and 26 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Response to Comments

13. Applicant's comments concerning fuel use are noted, particularly as directed to claims 1-3, however there has been no mention made of a vehicle consuming less fuel by the examiner, and it is not clear which portion of the examiner's action applicant is interpreting as a use of less fuel.

Applicant has argued that unexpected results have been achieved using a combination of structures known in the prior art, however no evidence of such results as specifically resulting only from that which is recited in the claims has been provided. The arguments of counsel cannot take the place of evidence in the record. In re Schulze, 346 F.2d 600, 602, 145 USPQ 716, 718 (CCPA 1965).

As regards the reference to Kerrebrock and the provision of a solution of sodium borohydride and water, when both constituents are provided it is not deemed to be an inappropriate characterization of the combination of the two to constitute a solution,

particularly in view of the lacking of any further distinctions with specific regard to the solution itself as recited in the rejected claims.

As regards the reference to Gallagher, note that Gallagher does refer to a metal catalyst, for example at col. 3, lines 57-63, and col.8, lines 5-12 and 27-33. Note that although the claims are interpreted *in light of* the specification, un-recited limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). During patent examination, the pending claims must be given their broadest reasonable interpretation consistent with the specification. *In re Hyatt*, 211 F.3d 1367, 1372, 54 USPQ2d 1664, 1667 (Fed. Cir. 2000). Applicant always has the opportunity to amend the claims during prosecution, and broad interpretation by the examiner reduces the possibility that the claim, once issued, will be interpreted more broadly than is justified. *In re Prater*, 415 F.2d 1393, 1404-05, 162 USPQ 541, 550-51 (CCPA 1969) The court explained that "reading a claim in light of the specification, to thereby interpret limitations explicitly recited in the claim, is a quite different thing from 'reading limitations of the specification into a claim,' to thereby narrow the scope of the claim by implicitly adding disclosed limitations which have no express basis in the claim." The court found that applicant was advocating the latter, i.e., the impermissible importation of subject matter from the specification into the claim.). See also *In re Morris*, 127 F.3d 1048, 1054-55, 44 USPQ2d 1023, 1027-28 (Fed. Cir. 1997)

In response to applicant's argument that the references must explicitly provide a suggestion for combining, a conclusion of obviousness may be made from common knowledge and common sense of the person of ordinary skill in the art without any specific hint or suggestion in a particular reference (see *In re Bozek*, 416 F.2d 1385, 1390, 163 USPQ 545, 549 (CCPA 1969)), with skill being presumed on the part of the artisan, rather than the lack thereof (see *In re Sovish* 769 F.2d 738, 742, 226 USPQ 771, 774 (Fed. Cir. 1985)); further, references may be combined although none of them explicitly suggests combining one with the other (see *In re Nilssen* 7 USPQ2d 1500 (Fed. Cir. 1989)). It has long been the law that the motivation to combine need not be found in prior art references, but equally can be found "in the knowledge generally

available to one of ordinary skill in the art." In re Jones, 958 F.2d 347, 351 (Fed. Cir. 1992) (citing In re Fine, 837 F.2d 1071, 1074 (Fed. Cir. 1988)).

The motivation to combine can be found either in a prior art reference, or it can be implicit in the knowledge of one of ordinary skill in the art. See In re Huston, 308 F.3d 1267, 1280 (Fed. Cir. 2002); Motorola, Inc. v. Interdigital Tech. Corp., 121 F.3d 1461, 1472 (Fed. Cir. 1997).

Sources suggesting a combination may be: (1) the combined teachings of the prior art, (2) the knowledge of the ordinary practitioner and (3) the nature of the problem to be solved. "The test for implicit showing is what the combined teachings, knowledge of one of ordinary skill in the art, and the nature of the problem to be solved as a whole would have suggested to those of ordinary skill in the art." In re Kotzab, 217 F.3d 1365, 1370, 55 USPQ2d 1313, 1317 (Fed.Cir. 2000).

Please further note the following from Section 2144 of the MPEP: "The rationale to modify or combine the prior art does not have to be expressly stated in the prior art or it may be reasoned from knowledge generally available to one of ordinary skill in the art, established scientific principles, or legal precedent...The reason or motivation to modify the reference may often suggest what the inventor has done, but for a different purpose or to solve a different problem...It is not necessary that the prior art suggest the combination to achieve the same advantage or result discovered by Applicant." Also Chief Judge Nies writes in a concurring opinion, "While there must be some teaching, reason, suggestion, or motivation to combine existing elements to produce the claimed device, it is not necessary that the cited references or the prior art specifically suggest making the combination...In sum, it is off the mark for litigants to argue, as many do, that an invention cannot be held to have been obvious unless a suggestion to combine prior art teachings is found in a specific reference". See In re Oetiker 977 F.2d 1443, 24 USPQ.2d 1443 (Fed.Cir.1992).

In response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was

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within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

Applicant's amendment of claim 28 is noted. Claim 28 has been amended so that it now apparently depends from both claims 3 and claims 4, 5, or 6. Not only is this a multiple dependent claim written to be dependent from other multiple dependent claims (which is improper as set forth above), the resulting scope of the claim is entirely unclear, in that any of claims 4/3, 5/3, and 6/3 already include the limitations of claim 3, making the recitation of both 3 and 4/3, 5/3, and 6/3 apparently redundant, furthermore claims 4/1, 5/1 and 6/1 include the limitations of claim 1, with the result that claim 28 read based on claim 3 and claims 4/1, 5/1 and 6/1 would then be self contradicting in view of the differences between claims 1 and 3, which would both be included in the resultant claim. In view of the substantial clouding of the claim scope as applicant has now amended it, it is not possible to make a meaningful analysis of the composite claim.

Conclusion

14. Applicant is reminded that claims 11 and 28 are further withdrawn from consideration in that they constitute multiple dependent claims which have been amended by applicant so as to depend from another multiple dependent claim.

15. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

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the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

16. Any inquiry concerning this communication or earlier communications from the examiner should be directed to F. Vanaman whose telephone number is 703-308-0424. Any inquiry of a general nature or relating to the status of this application should be directed to the group receptionist whose telephone number is 703-308-1113.

As of May 1, 2003, any response to this action should be mailed to:

Mail Stop _____
Commissioner for Patents
P. O. Box 1450
Alexandria, VA 22313-1450,

Or faxed to one of the following fax servers:

Regular Communications/Amendments: 703-872-9326
After Final Amendments: 703-872-9327
Customer Service Communications: 703-872-9325

F. VANAMAN
Primary Examiner
Art Unit 3618

A handwritten signature in black ink, appearing to read 'F. Vanaman', with a date '7/15/04' written below it.